IN THE CLAIMS:

1. **(Currently Amended)** A post-biopsy cavity treatment implant, comprising:

a first portion including a first porous matrix defining a first controlled pore architecture, and

a second portion coupled to the first portion, the second portion including a second porous matrix defining a second controlled pore architecture that is different from the first controlled pore architecture to cause the second portion to swell in a different manner than the first portion when the post-biopsy cavity treatment implant is implanted in an aqueous environment, **at least one of the first and second portions including an internal reservoir configured to contain at least one of a dye, a pigment and a therapeutic agent**.

2. **(Original)** The post-biopsy cavity treatment implant of claim 1, wherein the second portion swells faster than the first portion when the implant is implanted in the aqueous environment.

3. **(Original)** The post-biopsy cavity treatment implant of claim 1, wherein the second portion swells to a greater extent than the first portion when the implant is implanted in the aqueous environment.

4. **(Original)** The post-biopsy cavity treatment implant of claim 1, wherein the first controlled pore architecture differs from the second controlled pore architecture with respect to at least one of: pore density, pore shape, pore orientation and pore dimensions.

5. **(Original)** The post-biopsy cavity treatment implant of claim 1, wherein at least one of the first and second portions includes a radiopaque material disposed therein.

6. **(Original)** The post-biopsy cavity treatment implant of claim 1, wherein at least one of the first and second portions includes a radioactive material disposed therein.

7. **(Original)** The post-biopsy cavity treatment device of claim 1, wherein at least one of the first and second portions includes a paramagnetic material disposed therein.

8-9. **(Canceled)**

10. **(Original)** The post-biopsy cavity treatment implant of claim 1, wherein at least one of the first and second portions includes a contrast media disposed therein.

11. **(Canceled)**

12. **(Original)** The post-biopsy cavity treatment implant of claim 1, wherein at least one of the first and second portions is biodegradable.

13. **(Original)** The post-biopsy cavity treatment implant of claim 1, wherein at least one of the first and second portions includes collagen.

14. **(Original)** The post-biopsy cavity treatment implant of claim 1, wherein the first and second portions include at least one of a polylactide (PLA), a polyglycolide (PGA), a poly(lactide-co-glycolide) (PLGA), a polyglyconate, a polyanhydride, PEG, cellulose, a gelatin, a lipids, a polysaccharide, a starches and a polyorthoesters.

15. **(Original)** The post-biopsy cavity treatment implant of claim 1, wherein the first and second portions are configured so as to form a laminar structure.

16. **(Original)** The post-biopsy cavity treatment implant of claim 1, wherein the first portion defines a first surface and wherein the second portion defines a second surface that faces the first surface to define an interface between the first and second portions.

17. **(Currently Amended)** The post-biopsy cavity treatment implant of ~~claim 20~~ **claim 16**, wherein the interface is visualizable under ultrasound when the post-biopsy cavity treatment implant is implanted.

18. **(Original)** The post-biopsy cavity treatment implant of claim 1, wherein at least the first portion includes a plurality of fibers.

19. **(Original)** The post-biopsy cavity treatment implant of claim 1, wherein the first portion forms an inner core and wherein the second portion forms an outer shell disposed at least partially around the first portion.

20. **(Canceled)**

21. **(Currently Amended)** The post-biopsy cavity treatment implant of ~~claim 20~~ **claim 1**, wherein the internal reservoir is configured to deliver the at least one of dye, pigment and therapeutic agent through elution when the implant is implanted in the aqueous environment.

22. **(Currently Amended)** The post-biopsy cavity treatment implant of ~~claim 20~~ **claim 1**, wherein the internal reservoir is configured to deliver the at least one of dye, pigment and therapeutic agent at a first rate when the reservoir is breached and at a second rate that is lower than the first rate when the reservoir is not breached.

23. **(Original)** The post-biopsy cavity treatment implant of claim 1, further including a third portion, the third portion being radiopaque.

24. **(Original)** The post-biopsy cavity treatment implant of claim 23, wherein the third portion includes a metal.

25. **(Original)** The post-biopsy cavity treatment implant of claim 1, further including a third portion including a third porous matrix defining a third controlled pore architecture, the first, second and third portions collectively defining a predetermined pore density gradient.

26. **(Original)** The post-biopsy cavity treatment implant of claim 1, wherein the second portion is configured to have a second crosslinking density and wherein the first portion is configured to have a first crosslinking density that is greater than the second crosslinking density.

27. **(Original)** The post-biopsy cavity treatment implant of claim 26, wherein the second portion is configured to swell to a greater degree than the first portion when the implant is implanted in the aqueous environment.

28. **(Original)** The post-biopsy cavity treatment implant of claim 1, wherein the first and second portions include collagen and wherein a crosslinking density of at least one of the first and second portions is controlled through adding a selected amount of a bifunctional reagent to the collagen.

29. **(Original)** The post-biopsy cavity treatment implant of claim 28, wherein the bifunctional reagent includes at least one of a aldehyde and a cyanamide.

30. **(Original)** The post-biopsy cavity treatment implant of claim 29, wherein the aldehyde includes a glutaraldehyde.

31. **(Original)** The post-biopsy cavity treatment implant of claim 1, wherein the first and second portions include collagen and wherein a crosslinking density of the first and second portions is controlled by an application of energy to the collagen.

32. **(Original)** The post-biopsy cavity treatment implant of claim 31, wherein the application of energy includes at least one of dehydrothermal processing, exposure to UV light and radiation.

33. **(Original)** The post-biopsy cavity treatment implant of claim 1, wherein the first and second portions include collagen and wherein a crosslinking density of at least one of the first and second portions is controlled by a combination of dehydrothermal processing and exposure to cyanamide.

34. **(Withdrawn)** A method for mapping a lymphatic system following a cavity generating procedure, comprising:

providing a post-biopsy cavity treatment implant, the implant including a collagenous matrix having a non-uniform cross-linking density that is configured to cause the implant to swell non-uniformly when placed within an aqueous environment, the implant including a dye or a pigment contained therein;

implanting the provided post-biopsy cavity treatment implant into the cavity;

closing the cavity with the post-biopsy cavity treatment implant implanted therein;

causing the dye/pigment to be released from the implant and to propagate through the lymphatic system, and

visualizing the propagated dye/pigment in the lymphatic system using a selected visualization mode.

35. **(Withdrawn)** The method of claim 34, wherein the implant in the providing step includes a reservoir disposed within the collagenous matrix, the reservoir containing a volume of the dye/pigment and wherein the causing step includes a step of breaching the reservoir to release the dye/pigment.

36. **(Withdrawn)** The method of claim 35, wherein the breaching step includes a step of squeezing the implanted post-biopsy cavity treatment implant.

37. **(Withdrawn)** The method of claim 34, wherein the causing step includes a step of waiting for a predetermined period of time during which the implant degrades within the cavity and releases the dye/pigment.

38. **(Withdrawn)** The method of claim 34, wherein the at least one of dye and pigment is loaded within the collagenous matrix of the implant.

39. **(Withdrawn)** The method of claim 34, wherein visualizing mode in the visualizing step includes at least one of ultrasound, X-ray, MRI, elastography, microwave and the unaided eye.

40. **(Original)** A post-biopsy cavity treatment implant, comprising:

a first portion comprising a first collagenous matrix, the first collagenous matrix being controlled to have a first crosslinking density , and

a second portion in contact with the first portion, the second portion comprising a second collagenous matrix, the second collagenous matrix being controlled to have a second crosslinking density, the first crosslinking density being controlled to be different than the second cross-linking density.

41. **(Original)** The post-biopsy cavity treatment implant of claim 40, wherein the second portion swells faster than the first portion when the implant is implanted in the aqueous environment.

42. **(Original)** The post-biopsy cavity treatment implant of claim 40, wherein the second portion swells to a greater extent than the first portion when the implant is implanted in the aqueous environment.

43. **(Original)** The post-biopsy cavity treatment implant of claim 40, wherein at least one of the first and second collagenous matrices includes a radiopaque material disposed therein.

44. **(Original)** The post-biopsy cavity treatment implant of claim 40, wherein at least one of the first and second collagenous matrices includes a radioactive material disposed therein.

45. **(Original)** The post-biopsy cavity treatment device of claim 40, wherein at least one of the first and second collagenous matrices includes a paramagnetic material disposed therein.

46. **(Original)** The post-biopsy cavity treatment implant of claim 40, wherein at least one of the first and second collagenous matrices includes a dye disposed therein.

47. **(Original)** The post-biopsy cavity treatment implant of claim 40, wherein at least one of the first and second collagenous matrices includes a pigment disposed therein.

48. **(Original)** The post-biopsy cavity treatment implant of claim 40, wherein at least one of the first and second collagenous matrices includes a contrast media disposed therein.

49. **(Original)** The post-biopsy cavity treatment implant of claim 40, wherein at least one of the first and second collagenous matrices includes a therapeutic agent disposed therein.

50. **(Original)** The post-biopsy cavity treatment implant of claim 40, wherein at least one of the first and second portions is biodegradable.

51. **(Original)** The post-biopsy cavity treatment implant of claim 40, wherein at least one of the first and second portions includes collagen.

52. **(Original)** The post-biopsy cavity treatment implant of claim 40, wherein the first and second portions include at least one of a polylactide (PLA), a polyglycolide (PGA), a poly(lactide-co-glycolide) (PLGA), a polyglyconate, a polyanhydride, PEG, cellulose, a gelatin, a lipids, a polysaccharide, a starches and a polyorthoesters.

53. **(Original)** The post-biopsy cavity treatment implant of claim 40, wherein the first and second portions are configured so as to form a laminar structure.

54. **(Original)** The post-biopsy cavity treatment implant of claim 40, wherein the first portion defines a first surface and wherein the second portion defines a second surface that faces the first surface to define an interface between the first and second portions.

55. **(Original)** The post-biopsy cavity treatment implant of claim 54, wherein the interface is visualizable under ultrasound when the post-biopsy cavity treatment implant is implanted in the aqueous environment.

56. **(Original)** The post-biopsy cavity treatment implant of claim 40, wherein at least the first portion includes a plurality of fibers.

57. **(Original)** The post-biopsy cavity treatment implant of claim 40, wherein the first portion forms an inner core and wherein the second portion forms an outer shell disposed at least partially around the first portion.

58. **(Original)** The post-biopsy cavity treatment implant of claim 40, wherein at least one of the first and second portions includes an internal reservoir configured to contain at least one of a dye, a pigment and a therapeutic agent.

59. **(Original)** The post-biopsy cavity treatment implant of claim 58, wherein the internal reservoir is configured to deliver the at least one of dye, pigment and therapeutic agent through elution when the implant is implanted in the aqueous environment.

60. **(Original)** The post-biopsy cavity treatment implant of claim 58, wherein the internal reservoir is configured to deliver the at least one of dye, pigment and therapeutic agent at a first rate when the reservoir is breached and at a second rate that is lower than the first rate when the reservoir is not breached.

61. **(Original)** The post-biopsy cavity treatment implant of claim 40, further including a third portion disposed between the first and second portions, the third portion being radiopaque.

62. **(Original)** The post-biopsy cavity treatment implant of claim 61, wherein the third portion includes a metal.

63. **(Original)** The post-biopsy cavity treatment implant of claim 40, further including a third portion including a third porous matrix defining a third controlled pore architecture, the first, second and third portions collectively defining a predetermined pore density gradient.

64. **(Currently Amended)** The post-biopsy cavity treatment implant of ~~claim 1~~ claim 40, wherein the first and second portions include collagen and wherein the crosslinking density of the at least one of the first and second portions is controlled through adding a selected amount of a bifunctional reagent to the collagen.

65. **(Original)** The post-biopsy cavity treatment implant of claim 64, wherein the bifunctional reagent includes at least one of a aldehyde and a cyanamide.

66. **(Original)** The post-biopsy cavity treatment implant of claim 65, wherein the aldehyde includes a glutaraldehyde.

67. **(Original)** The post-biopsy cavity treatment implant of claim 40, wherein the first and second portions include collagen and wherein a crosslinking density of the first and second portions is controlled by an application of energy to the collagen.

68. **(Original)** The post-biopsy cavity treatment implant of claim 67, wherein the application of energy includes at least one of dehydrothermal processing, exposure to UV light and radiation.

69. **(Original)** The post-biopsy cavity treatment implant of claim 40, wherein the first and second portions include collagen and wherein the crosslinking density of at least one of the first and second portions is controlled by a combination of dehydrothermal processing and exposure to cyanamide.

70. **(Canceled)**

71. **(Withdrawn)** Method of filling a cavity created by an excisional procedure, the cavity having a predetermined shape, the method comprising the steps of:

providing an implant, the implant including at least a first portion and a second portion, the first portion comprising a first collagenous matrix that defines a first selected crosslinking density, the second portion comprising a second collagenous matrix that defines a second selected crosslinking density that is different than the second cross-linking density, the first and second cross-linking densities being selected so as to cause the first and second portions to swell into a size and a shape that is similar to the predetermined shape of the cavity when the implant is implanted;

implanting the implant within the cavity through an incision;

adding an aqueous solution to the cavity if the cavity is not sufficiently aqueous to cause the implant to swell, and

closing the incision with the implant implanted in the cavity.

72. **(Withdrawn)** The method of claim 71, wherein the first portion comprises a plurality of first collagenous fibers, each of the plurality of first collagenous fibers having the first selected crosslinking density.

plurality of second collagenous fibers, each of the plurality of second collagenous fibers having the second selected crosslinking density.

74. (New) A post-biopsy cavity treatment implant, comprising:

a first portion including a first porous matrix defining a first controlled pore architecture;

a second portion coupled to the first portion, the second portion including a second porous matrix defining a second controlled pore architecture that is different from the first controlled pore architecture to cause the second portion to swell in a different manner than the first portion when the post-biopsy cavity treatment implant is implanted in an aqueous environment, and

a third portion including a third porous matrix defining a third controlled pore architecture, the first, second and third portions collectively defining a predetermined pore density gradient.

75. (New) The post-biopsy cavity treatment implant of claim 74, wherein the second portion swells faster than the first portion when the implant is implanted in the aqueous environment.

76. (New) The post-biopsy cavity treatment implant of claim 74, wherein the second portion swells to a greater extent than the first portion when the implant is implanted in the aqueous environment.

77. (New) The post-biopsy cavity treatment implant of claim 74, wherein the first controlled pore architecture differs from the second controlled pore architecture with respect to at least one of: pore density, pore shape, pore orientation and pore dimensions.

73. **(Withdrawn)** The method of claim 71, wherein the second portion comprises a

78. (New) The post-biopsy cavity treatment implant of claim 74, wherein at least one of the first and second portions includes a radiopaque material disposed therein.

79. (New) The post-biopsy cavity treatment implant of claim 74, wherein at least one of the first and second portions includes a radioactive material disposed therein.

80. (New) The post-biopsy cavity treatment device of claim 74, wherein at least one of the first and second portions includes a paramagnetic material disposed therein.

81. (New) The post-biopsy cavity treatment implant of claim 74, wherein at least one of the first and second portions includes a dye disposed therein.

82. (New) The post-biopsy cavity treatment implant of claim 74, wherein at least one of the first and second portions includes a pigment disposed therein.

83. (New) The post-biopsy cavity treatment implant of claim 74, wherein at least one of the first and second portions includes a contrast media disposed therein.

84. (New) The post-biopsy cavity treatment implant of claim 74, wherein at least one of the first and second portions includes a therapeutic agent disposed therein.

85. (New) The post-biopsy cavity treatment implant of claim 74, wherein at least one of the first and second portions is biodegradable.

86. (New) The post-biopsy cavity treatment implant of claim 74, wherein at least one of the first and second portions includes collagen.

87. (New) The post-biopsy cavity treatment implant of claim 74, wherein the first and second portions include at least one of a polylactide (PLA), a polyglycolide (PGA), a poly(lactide-co-glycolide) (PLGA), a polyglyconate, a polyanhydride, PEG, cellulose, a gelatin, a lipids, a polysaccharide, a starches and a polyorthoesters.

88. (New) The post-biopsy cavity treatment implant of claim 74, wherein the first and second portions are configured so as to form a laminar structure.

89. (New) The post-biopsy cavity treatment implant of claim 74, wherein the first portion defines a first surface and wherein the second portion defines a second surface that faces the first surface to define an interface between the first and second portions.

90. (New) The post-biopsy cavity treatment implant of claim 89, wherein the interface is visualizable under ultrasound when the post-biopsy cavity treatment implant is implanted.

91. (New) The post-biopsy cavity treatment implant of claim 74, wherein at least the first portion includes a plurality of fibers.

92. (New) The post-biopsy cavity treatment implant of claim 74, wherein the first portion forms an inner core and wherein the second portion forms an outer shell disposed at least partially around the first portion.

93. (New) The post-biopsy cavity treatment implant of claim 74, wherein at least one of the first and second portions includes an internal reservoir configured to contain at least one of a dye, a pigment and a therapeutic agent.

94. (New) The post-biopsy cavity treatment implant of claim 93, wherein the internal reservoir is configured to deliver the at least one of dye, pigment and therapeutic agent through elution when the implant is implanted in the aqueous environment.

95. (New) The post-biopsy cavity treatment implant of claim 93, wherein the internal reservoir is configured to deliver the at least one of dye, pigment and therapeutic agent at a first rate when the reservoir is breached and at a second rate that is lower than the first rate when the reservoir is not breached.

96. (New) The post-biopsy cavity treatment implant of claim 74, wherein the third portion being radiopaque.

97. (New) The post-biopsy cavity treatment implant of claim 96, wherein the third portion includes a metal.

98. (New) The post-biopsy cavity treatment implant of claim 74, wherein the second portion is configured to have a second crosslinking density and wherein the first portion is configured to have a first crosslinking density that is greater than the second crosslinking density.

99. (New) The post-biopsy cavity treatment implant of claim 74, wherein the first and second portions include collagen and wherein a crosslinking density of at least one of the first and second portions is controlled through adding a selected amount of a bifunctional reagent to the collagen.

100. (New) The post-biopsy cavity treatment implant of claim 99, wherein the bifunctional reagent includes at least one of a aldehyde and a cyanamide.

101. (New) The post-biopsy cavity treatment implant of claim 100, wherein the aldehyde includes a glutaraldehyde.

102. (New) The post-biopsy cavity treatment implant of claim 74, wherein the first and second portions include collagen and wherein a crosslinking density of the first and second portions is controlled by an application of energy to the collagen.

103. (New) The post-biopsy cavity treatment implant of claim 102, wherein the application of energy includes at least one of dehydrothermal processing, exposure to UV light and radiation.

104. (New) The post-biopsy cavity treatment implant of claim 74, wherein the first and second portions include collagen and wherein a crosslinking density of at least one of the first and second portions is controlled by a combination of dehydrothermal processing and exposure to cyanamide.

105. (New) A post-biopsy cavity treatment implant, comprising:

a first portion including a first porous matrix defining a first controlled pore architecture, and

a second portion coupled to the first portion, the second portion including a second porous matrix defining a second controlled pore architecture that is different from the first controlled pore architecture to cause the second portion to swell in a different manner than the first portion when the post-biopsy cavity treatment implant is implanted in an aqueous environment, the second portion being configured to have a second crosslinking density and the first portion being configured to have a first crosslinking density that is greater than the second crosslinking density.

106. (New) The post-biopsy cavity treatment implant of claim 105, wherein the second portion swells faster than the first portion when the implant is implanted in the aqueous environment.

107. (New) The post-biopsy cavity treatment implant of claim 105, wherein the second portion swells to a greater extent than the first portion when the implant is implanted in the aqueous environment.

108. (New) The post-biopsy cavity treatment implant of claim 105, wherein the first controlled pore architecture differs from the second controlled pore architecture with respect to at least one of: pore density, pore shape, pore orientation and pore dimensions.

109. (New) The post-biopsy cavity treatment implant of claim 105, wherein at least one of the first and second portions includes a radiopaque material disposed therein.

110. (New) The post-biopsy cavity treatment implant of claim 105, wherein at least one of the first and second portions includes a radioactive material disposed therein.

111. (New) The post-biopsy cavity treatment device of claim 105, wherein at least one of the first and second portions includes a paramagnetic material disposed therein.

112. (New) The post-biopsy cavity treatment implant of claim 105, wherein at least one of the first and second portions includes a dye disposed therein.

113. (New) The post-biopsy cavity treatment implant of claim 105, wherein at least one of the first and second portions includes a pigment disposed therein.

114. (New) The post-biopsy cavity treatment implant of claim 105, wherein at least one of the first and second portions includes a contrast media disposed therein.

115. (New) The post-biopsy cavity treatment implant of claim 105, wherein at least one of the first and second portions includes a therapeutic agent disposed therein.

116. (New) The post-biopsy cavity treatment implant of claim 105, wherein at least one of the first and second portions is biodegradable.

117. (New) The post-biopsy cavity treatment implant of claim 105, wherein at least one of the first and second portions includes collagen.

118. (New) The post-biopsy cavity treatment implant of claim 105, wherein the first and second portions include at least one of a polylactide (PLA), a polyglycolide (PGA), a poly(lactide-co-glycolide) (PLGA), a polyglyconate, a polyanhydride, PEG, cellulose, a gelatin, a lipids, a polysaccharide, a starches and a polyorthoesters.

119. (New) The post-biopsy cavity treatment implant of claim 105 wherein the first and second portions are configured so as to form a laminar structure.

120. (New) The post-biopsy cavity treatment implant of claim 105, wherein the first portion defines a first surface and wherein the second portion defines a second surface that faces the first surface to define an interface between the first and second portions.

121. (New) The post-biopsy cavity treatment implant of claim 120, wherein the interface is visualizable under ultrasound when the post-biopsy cavity treatment implant is implanted.

122. (New) The post-biopsy cavity treatment implant of claim 105, wherein at least the first portion includes a plurality of fibers.

123. (New) The post-biopsy cavity treatment implant of claim 105, wherein the first portion forms an inner core and wherein the second portion forms an outer shell disposed at least partially around the first portion.

124. (New) The post-biopsy cavity treatment implant of claim 105, wherein at least one of the first and second portions includes an internal reservoir configured to contain at least one of a dye, a pigment and a therapeutic agent.

125. (New) The post-biopsy cavity treatment implant of claim 124, wherein the internal reservoir is configured to deliver the at least one of dye, pigment and therapeutic agent through elution when the implant is implanted in the aqueous environment.

126. (New) The post-biopsy cavity treatment implant of claim 124, wherein the internal reservoir is configured to deliver the at least one of dye, pigment and therapeutic agent at a first rate when the reservoir is breached and at a second rate that is lower than the first rate when the reservoir is not breached.

127. (New) The post-biopsy cavity treatment implant of claim 105, further including a third portion, the third portion being radiopaque.

128. (New) The post-biopsy cavity treatment implant of claim 127, wherein the third portion includes a metal.

129. (New) The post-biopsy cavity treatment implant of claim 105, further including a third portion including a third porous matrix defining a third controlled pore architecture, the first, second and third portions collectively defining a predetermined pore density gradient.

130. (New) The post-biopsy cavity treatment implant of claim 105, wherein the second portion is configured to swell to a greater degree than the first portion when the implant is implanted in the aqueous environment.

131. (New) The post-biopsy cavity treatment implant of claim 105, wherein the first and second portions include collagen and wherein a crosslinking density of at least one of the first and second portions is controlled through adding a selected amount of a bifunctional reagent to the collagen.

132. (New) The post-biopsy cavity treatment implant of claim 131, wherein the bifunctional reagent includes at least one of a aldehyde and a cyanamide.

133. (New) The post-biopsy cavity treatment implant of claim 132, wherein the aldehyde includes a glutaraldehyde.

134. (New) The post-biopsy cavity treatment implant of claim 105, wherein the first and second portions include collagen and wherein a crosslinking density of the first and second portions is controlled by an application of energy to the collagen.

135. (New) The post-biopsy cavity treatment implant of claim 134, wherein the application of energy includes at least one of dehydrothermal processing, exposure to UV light and radiation.

136. (New) The post-biopsy cavity treatment implant of claim 105, wherein the first and second portions include collagen and wherein a crosslinking density of at least one of the first and second portions is controlled by a combination of dehydrothermal processing and exposure to cyanamide.